



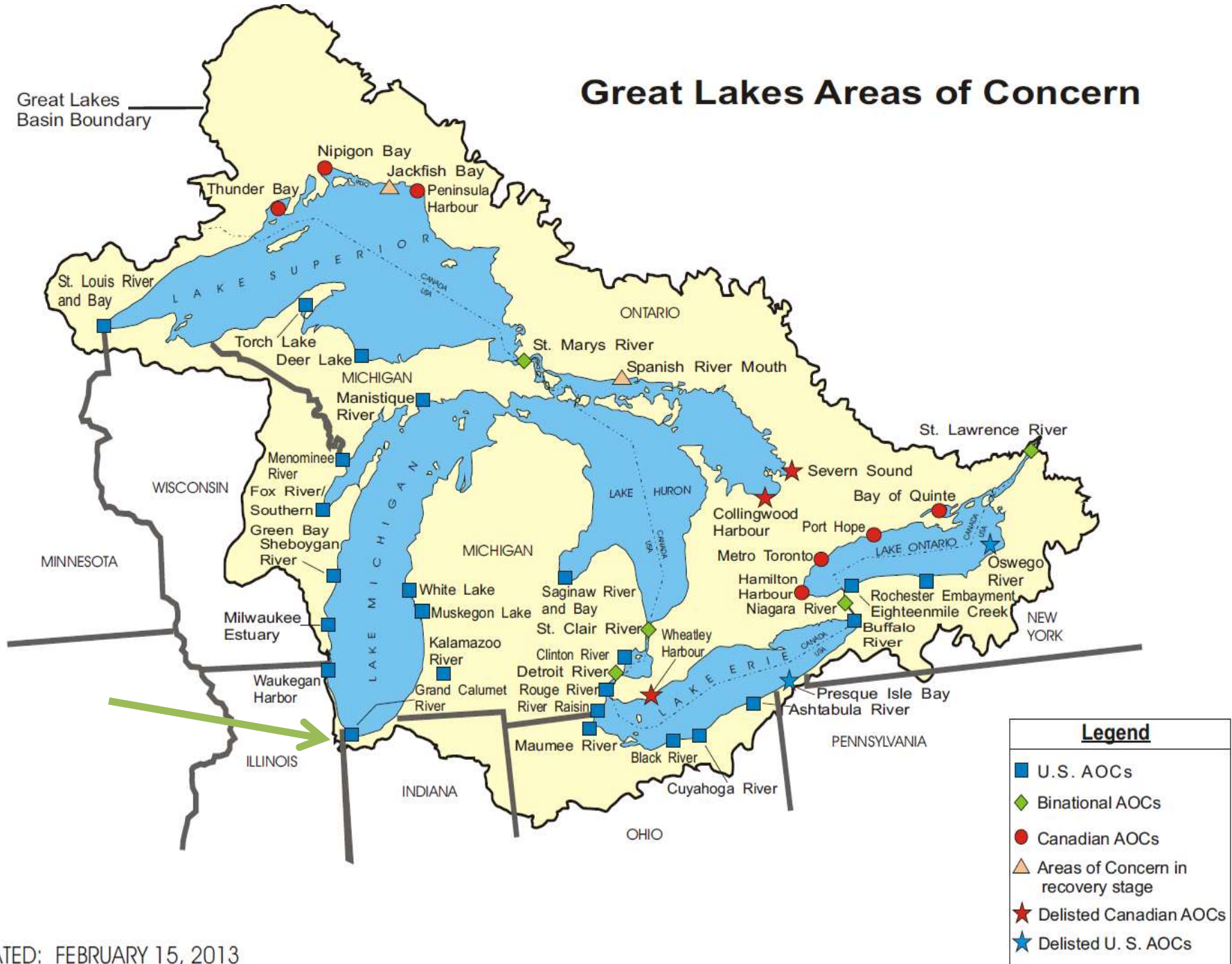
Grand Calumet River Area of Concern (AOC) Beaches



2017 Annual Grand Calumet River AOC Seminar
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IDEM Lake Michigan Beaches Program

Great Lakes Areas of Concern





Indiana Beaches in the AOC

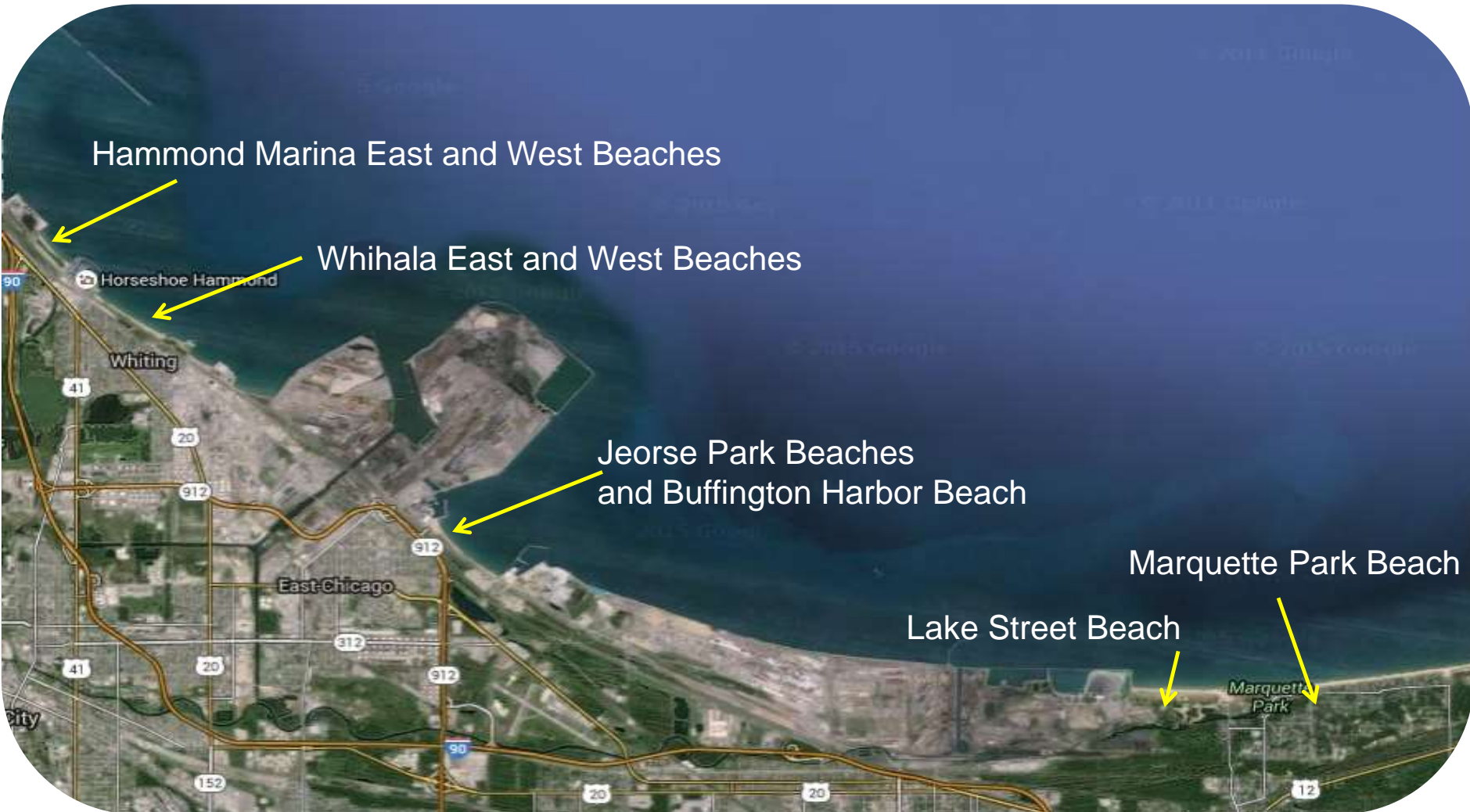
Hammond Marina East and West Beaches

Whihala East and West Beaches

Jeorse Park Beaches
and Buffington Harbor Beach

Marquette Park Beach

Lake Street Beach





How the Beach Program Helps the AOC

- Indiana uses BEACH Act funding to help pay for *Escherichia coli* (*E. coli*) sampling of water at coastal beaches and to notify the public of whether the beach is safe for swimming
- Designated swim season typically runs from Memorial Day through Labor Day
- Indiana's recreational water quality standards applicable to the Great Lakes Basin are specified in 327 Indiana Administrative Code 2-1.5-8(e)(2)
 - *E. coli* is the fresh water fecal indicator bacteria
 - Single sample maximum of 235 colony forming units (CFUs)/100 mL
 - A beach advisory or closure action must be taken in response to an exceedance
 - Each beach manager determines whether to post an advisory or closure in response to an exceedance

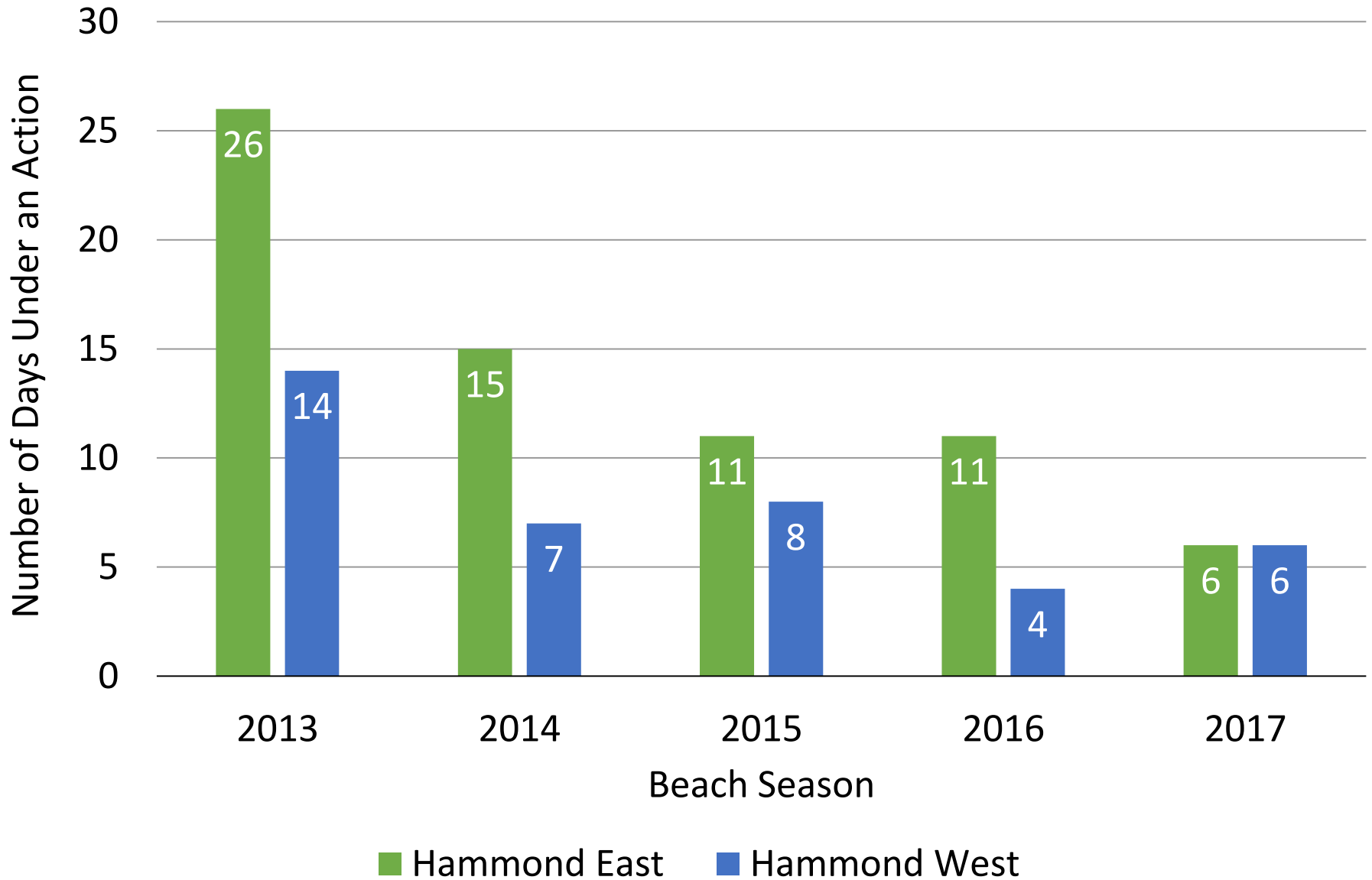


City of Hammond Beaches

- Hammond Marina East Beach and Hammond Marina West Beach
- One sampling point per beach
- Monitored seven days per week
- Hammond Marina West Beach is dog friendly
- Managed by the Hammond Port Authority



Hammond Beaches - Days Under an Action



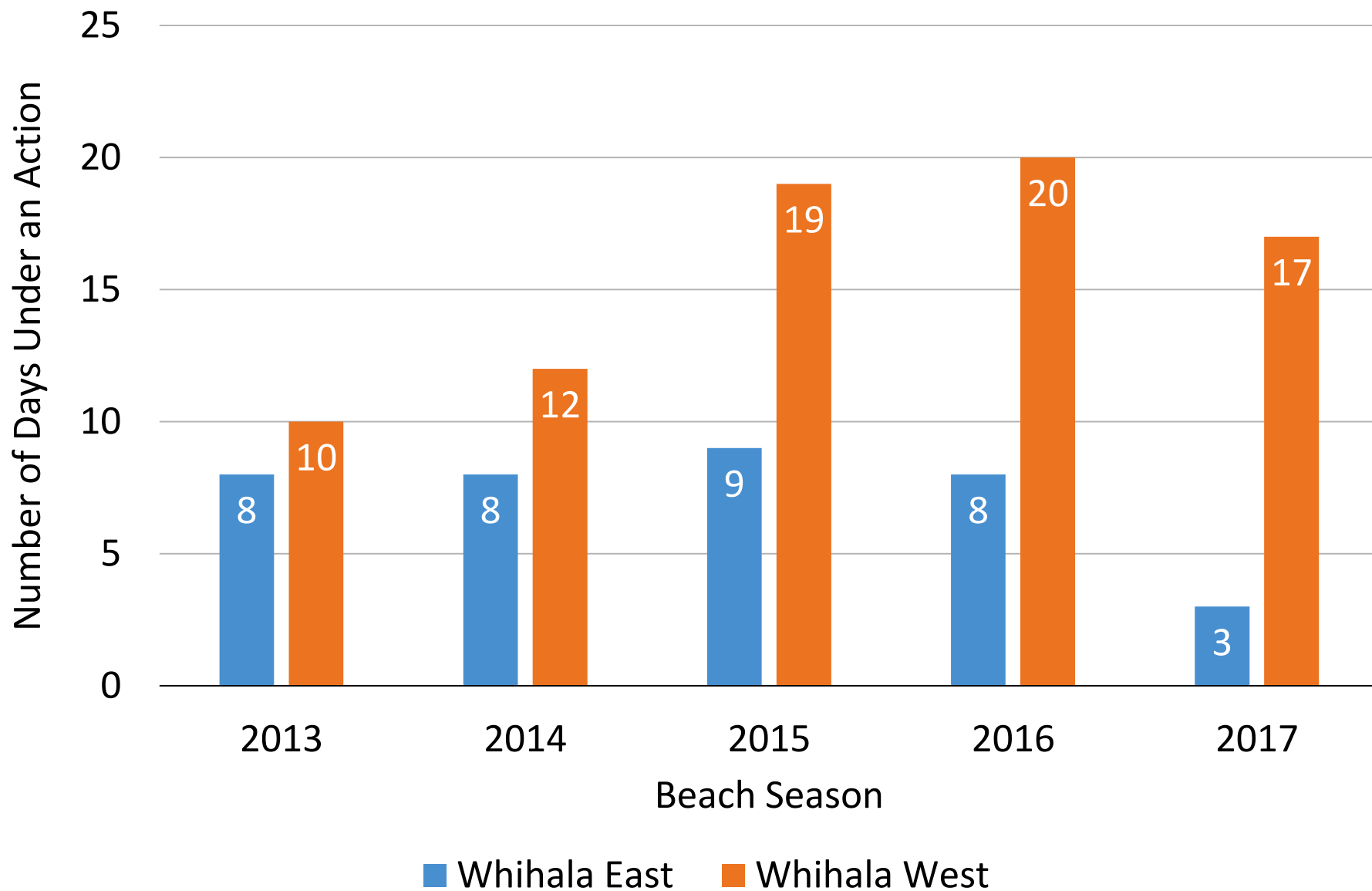


City of Whiting Beaches

- Whihala Beach East and Whihala Beach West
- One sampling location per beach
- Monitored seven days per week
- Whihala Beach West has point source storm water outfall
- Managed by Whiting Parks Department



Whihala Beaches - Days Under an Action



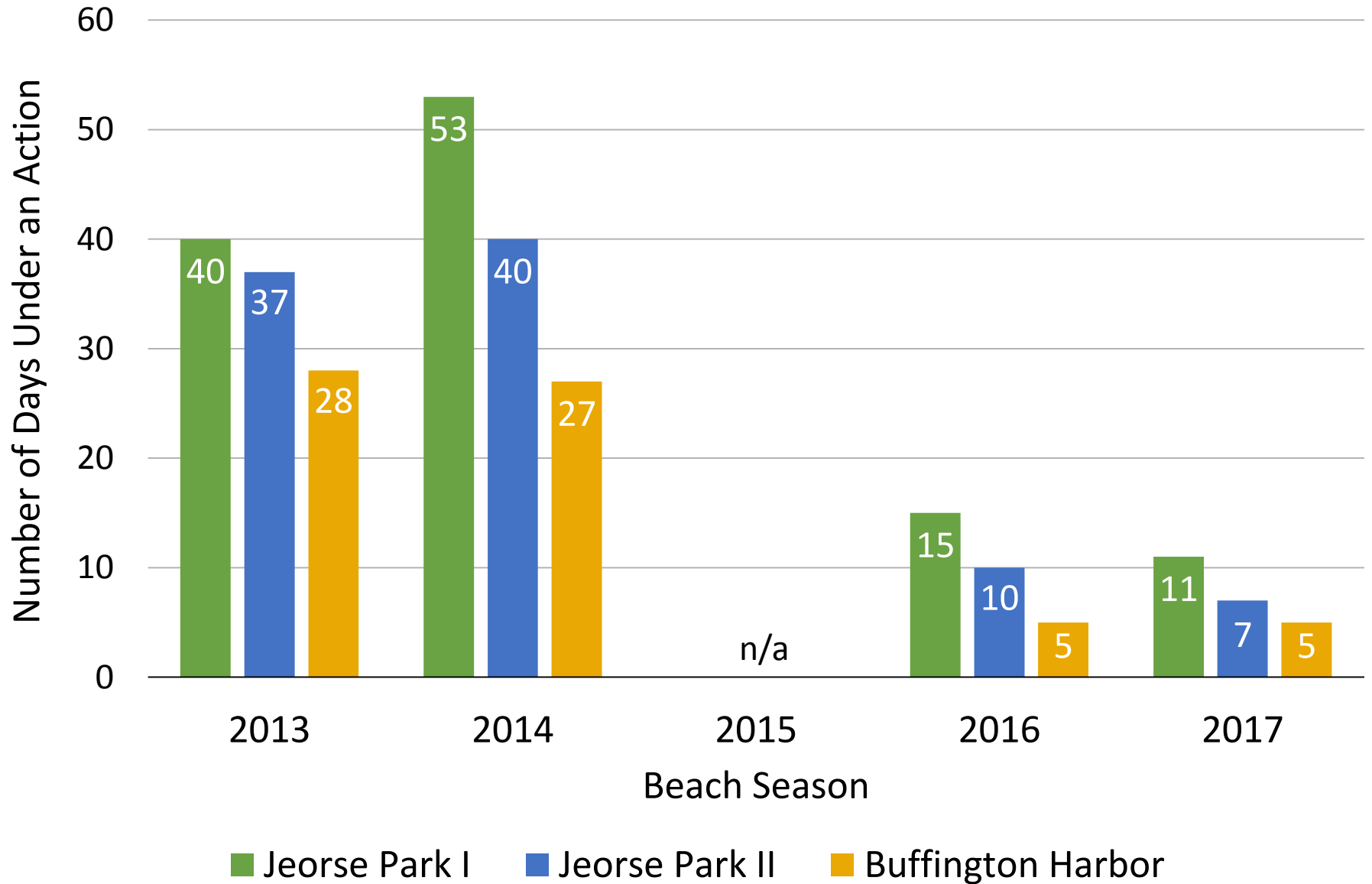


City of East Chicago Beaches

- Jeorse Park I, Jeorse Park II, and Buffington Harbor Beaches
- One sampling location per beach
- Monitored seven days per week since 2013
- Opened to public on June 13, 2016
- Co-managed by the East Chicago Health and East Chicago Parks Departments
- Closed due to renovation of lakefront park during 2015 beach season



East Chicago Beaches - Days Under an Action



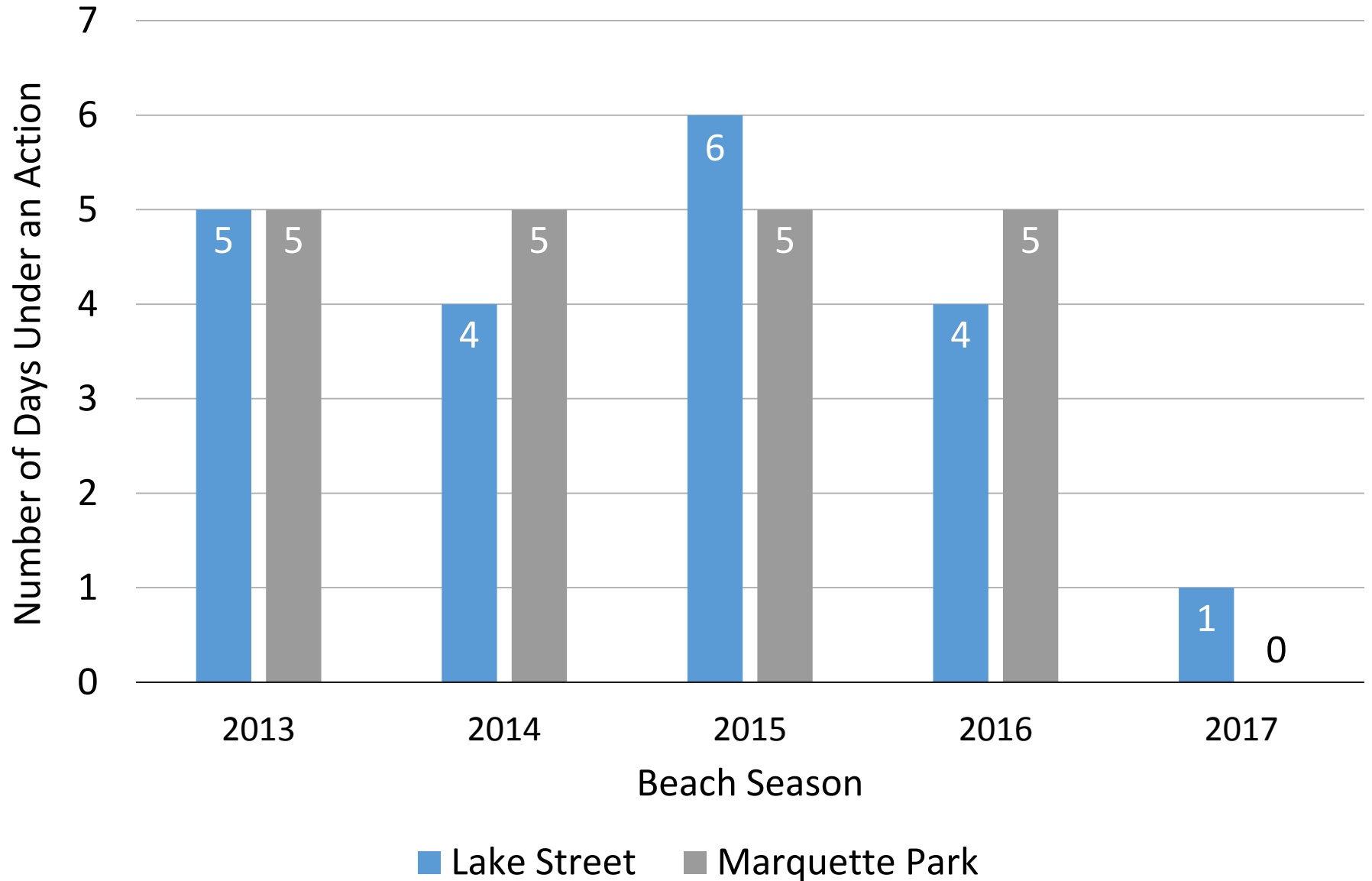


City of Gary Beaches

- Lake Street, Marquette Park and Wells Street Beaches
- Wells Street Beach is not located within AOC
- Lake Street has two sampling locations
- Marquette Park has four sampling locations
- Monitored five days per week (Monday - Friday)
- Co-managed by the Gary Sanitary District and Gary Parks Department



Gary Beaches - Days Under an Action





Beneficial Use Impairment (BUI) #10: Beach Closings

This BUI can be considered for removal when:

Each individual beach along the Lake Michigan shoreline in the AOC has a percent exceedance rate of no higher than 15% for the *E. coli* samples taken from Memorial Day to Labor Day for three years out of a five-year period **OR** ...



This BUI can be considered for removal when:

Percent exceedance rates at AOC beaches will be compared to percent exceedance rates for comparable Lake Michigan beaches located outside of the AOC to determine if there is a significant difference for three years out of a five-year period, and if none occurs, then the Beach Closure BUI may be suggested for removal. A significant difference is defined as no greater than a one percent variance between an individual AOC beach and an individual non-AOC beach in each of the three years relied upon for suggesting BUI removal.

Note: *Contamination that leads to exceedances within the AOC may also be attributable to sources outside the AOC.*



Grand Calumet River AOC Beaches

AOC Beach Exceedance Rates by Year*	2012	2013	2014	2015	2016	2017
Hammond West	13	14	7	8	4	6
Hammond East	26	25	16	10	11	6
Whihala West	15	9	12	18	20	17
Whihala East	9	9	8	8	8	3
Jeorse Park I	70	47	54	42	24	11
Jeorse Park II	52	38	40	26	13	7
Buffington Harbor	33	28	29	20	13	5
Lake Street	5	4	3	5	4	1
Marquette Park	4	4	3	5	2	0

* Exceedance rates based on number of samples collected Memorial Day weekend through Labor Day weekend



Non-AOC Reference Site Beaches

Non-AOC Beach Exceedance Rates by Year*	2012	2013	2014	2015	2016	2017
Indiana Dunes State Park West	15	7	14	12	13	8
Indiana Dune State Park East	11	7	12	14	9	8
Ogden Dunes West	3	5	11	6	5	1
Ogden Dunes East	4	5	14	5	3	1
Washington Park	11	11	15	8	5	5

* *Exceedance rates based on number of samples collected Memorial Day weekend through Labor Day weekend*



Impacts to Our Beaches





Jeorse Park Beach

- Historically high annual exceedance rates for *E. coli*
- Task Force formed in 2012
- Michigan State University granted funding to model the bacterial flow
- Matched funds provided by East Chicago Waterway Management District
- U.S. Army Corps of Engineers partnered with the City of East Chicago to further model and assess the beach structure and develop an ecosystem restoration project





Jeorse Park Beach (looking west)





Jeorse Park Beach I: Historically

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of Samples*	75	71	72	78	75	67	63	99	99	105	101	99
Number of Exceedances	34	42	49	59	56	31	44	47	53	44	24	11
% Exceedance	45%	59%	68%	76%	75%	46%	70%	47%	54%	42%	24%	11%

Samples were collected only on weekdays during years 2005-2012.

*Number of samples collected from Memorial Day weekend through Labor Day



Beach Best Management Practices (BMPs) at East Chicago Beaches

- Adopt-a-Beach Program participant
- More frequent beach grooming





Beach BMPs at East Chicago Beaches

- New garbage receptacles and recycling containers





Beach BMPs at East Chicago Beaches

- New signs prohibiting feeding of birds and proper bait and fishing tackle disposal





Thank You!



A border collie named River chases gulls off Jeorse Park Beach